

REMARKS

In the present Office Action, claims 1-14 and 21 were examined. Claims 1 – 14 and 21 are rejected, and claims 15-20 are withdrawn and no claims are allowed. By this Amendment, claim 9 has been amended, claims 1-8 and 15-21 have been canceled, and no claims have been added. Accordingly, claims 9-14 are presented for further examination. No new matter has been added. By this Amendment, claims 9-14 are believed to be in condition for allowance.

Claims 1-8 and 21 were rejected under 35 USC §102(b) as anticipated by U.S. Patent No. 5,800,930 to Chen, et al. In the present amendment, claims 1-8 and 21 have been canceled. Accordingly, Applicants submit the present rejection has been rendered moot and respectfully request the Examiner withdraw this rejection.

Claims 1-2 and 5-7 were rejected under 35 USC §102(b) as anticipated by U.S. Patent No. 5,071,520 to Lin, et al. Claims 1-2 and 5-7 have been canceled herein. Accordingly, Applicants submit the present rejection is rendered moot and respectfully request the Examiner withdraw the rejection.

Claims 1-14 and 21 were rejected under 35 USC §103(a) as obvious over Lin, et al. or Chen, et al. in view of U.S. Patent No. 6,703,564 to Mori. Claims 1-8 and 21 have been canceled herein. Accordingly, the rejection as applied to claims 1-8 and 21 has been rendered moot. As to claims 9-14, Applicants respectfully disagree with the Examiner.

The Lin, et al. reference discloses that a foil, if desired, may be rinsed and then subjected to a zinc plating treatment. The plating treatment may be used to apply a coating of zinc to the roughened or dendritic side of the foil. The coating may be between 0.3 to about 3.0 g/m². The zinc plating may be applied utilizing a plating solution including a suitable form of zinc, such as in the form of zinc sulfate. (See column 3, lines 40-48). This treatment, described in Lin, et al., is also described in the current specification at page 2, lines 19-27. Additionally, Lin, et al. discloses an antitarnish treatment which comprises electrolytically depositing chromium and zinc ions on the foil.

Chen, et al. disclose a release layer 16 disposed between a wrought metal carrier layer 12 and a metal foil 14. The release layer is an admixture of a metal and metal oxide with a thickness on the order of 10 to 300 angstroms.

Mori discloses a printed wiring board formed from a printed wiring substrate having a plurality of wiring layers and a thermal expansion buffering sheet having a lower coefficient of thermal expansion than that of the wiring substrate. At column 3, lines 39-46, Mori discloses bonding the thermal expansion buffering sheet to the laminated substrate. On both sides of the thermal expansion buffering sheet wiring patterns are provided. In the wiring pattern, via holes are formed on the thermal expansion buffering sheet by laser.

As recited in amended claim 9 of the present application, Applicants' copper foil is coated with a laser ablation inhibiting layer effective for preventing a via from extending through the copper foil. The laser ablation inhibiting layer has an average reflectivity value of at least 40 and is effective to provide a lamination peel strength to FR-4 of at least 4.5 pounds per inch. Support for this claim can be found at least on page 10, line 23 to page 11, line 5.

There is nothing in the Chen, et al., Lin, et al. or Mori references that teach or suggest an electrically conductive circuit having a dielectric substrate and a first copper foil layer coated with a laser ablation inhibiting layer having an average reflectivity value of at least 40 that is effective to provide a lamination peel strength to FR-4 of at least 4.5 pounds per inch. Further, none of the references, taken alone or in combination, disclose a laser ablation inhibiting layer which prevents a via from extending through a copper foil. Accordingly, claim 9-14 are allowable over Chen, et al. or Lin, et al. in view of Mori.

Furthermore, Applicants submit the present invention is not inherently disclosed by Chen, et al., Lin, et al., or Mori, because none of the copper foils in any reference, either taken alone or in combination, disclose or suggest having a layer coated thereon which is effective for preventing a via from extending through the copper foil.

Accordingly, Applicants submit that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. If the Examiner considers that an additional amendment is required to place the application in condition for allowance, he is invited to contact Applicants' attorney at the telephone number listed below.

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Respectfully submitted,
William L. Brenneman, et al.

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Reg. No. 52,941


Signature of Attorney
Elizabeth A. Galletta
WIGGIN and DANA LLP
One Century Tower
New Haven, CT 06508-1832
Telephone: (203) 498-4345
Facsimile: (203) 782-2889